

2018 AWWA Water Audit Level 1 Validation – Review Document

Audit Information:

Utility: Bakersfield PWS ID: 1510031

System Type: Potable Audit Period: Calendar Year 2018

Utility Representation: Sam Blue, Tylor Hester, Art Chianello, Kristina (Kris) Budak - Director

Validation Date: 9/10/2019 Call Time: 8:00 am Sufficient Supporting Documents Provided: Yes

Validation Findings & Confirmation Statement:

Key Audit Metrics:

Data Validity Score: 65 Data Validity Band (Level): Band III (51-70)

II: -2.52 Real Loss: -38.71 (gal/conn/day) Apparent Loss: 20.10 (gal/conn/day) Non-revenue water as percent of cost of operating system: 0.7%

The results of the audit present negative losses, which are not plausible. The audit has been Level 1 validated, with confirmation of methodology and examination of summary supporting records. The underlying error(s) creating implausible metrics has not been determined from the summary data, which means the error(s) exist within raw data or measurement instrumentation. Advanced validation beyond Level 1 is required to resolve underlying error(s). The validator's opinion of priority areas needing investigation to resolve underlying error(s) are noted below:

- Level 2 validation on raw data for Billed Metered Authorized Consumption to determine and resolve any instances of potable volume duplication.
- Level 3 validation for improved understanding of Supply Meter (Own or Import) Master Meter Error: consider adopting or increasing the rigor of a source meter volumetric testing and calibration program, informed by the guidance provided in AWWA Manual M36 – Appendix A.
- Level 2 validation to confirm temporal alignment of Billed Metered Authorized Consumption with Water Supplied: account level pro-rating the first and last billing cycles of the audit period to better align consumption with actual dates of use, and using read date as basis for reporting.

Certification Statement by Validator:

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit. ☒

Validator Information:

Water Audit Validator: Drew Blackwell Validator Qualifications: Contractor for CA-NV AWWA Water Loss TAP

Validator Provided

2018 AWWA Water Audit Level 1 Validation

Water System Name: City of Bakersfield

Water System ID Number: CA1510031

Water Audit Period: Calendar Year 2018

Water Audit & Water Loss Improvement Steps:

Steps taken in preceding year to increase data validity, reduce real loss and apparent loss as informed by the annual validated water audit:

Water rates analyzed and updated, Variable production cost reporting methods updated, documentation of meter testing obtained, GIS used in field to verify infrastructure

Certification Statement by Utility Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audits and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

Utility Provided

ARTHUR CHIANELLO

WATER RESOURCES Manager



9-26-2019

Executive Name (Print)

Executive Position

Signature

Date